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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/825,329

04/16/2004

Dieter Lau

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EXAMINER

FREAY, CHARLES GRANT

ART UNIT

PAPER NUMBER

3746

MAIL DATE

DELIVERY MODE

12/16/2008

PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/825,329	<b>Applicant(s)</b> LAU, DIETER	
	<b>Examiner</b> Charles G. Freay	<b>Art Unit</b> 3746	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 06 October 2008.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-6 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-6 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on 06 October 2008 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All    b) ☐ Some \*    c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)            | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | Paper No(s)/Mail Date. _____                                      |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>10/2008</u> .   | 6) <input type="checkbox"/> Other: _____                          |

## **DETAILED ACTION**

### ***Continued Examination Under 37 CFR 1.114***

A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on October 6, 2008 has been entered.

### ***Drawings***

The drawings were received on October 6, 2008. These drawings are accepted.

### ***Claim Objections***

Claim 1 objected to because of the following informalities: in line 5 "filed" should be deleted. As discussed during the interview of 12/2/08 this term is redundant/unnecessary. Appropriate correction is required.

### ***Claim Rejections - 35 USC § 112***

The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

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Claims 1-6 are rejected under 35 U.S.C. 112, first paragraph, as based on a disclosure which is not enabling. The recitation or identification of the drive means is critical or essential to the practice of the invention, but not included in the claim(s) is not enabled by the disclosure. See *In re Mayhew*, 527 F.2d 1229, 188 USPQ 356 (CCPA 1976). The fourth step of the method sets forth performing reciprocal mutually coordinated rotational-speed variations of the various compressor assemblies until “the minimal fuel consumption of the natural-gas station and a minimal emission of an exhaust gas quantity” is determined. The claims and the specification have not clearly defined what the driving mechanism of the compressors are. It is assumed that these are the devices which would consume the fuel and create the emissions which are being discussed in the claims. An understanding of the type of drive is essential to be able to perform the step. It is noted that some references are incorporated by reference in this application, see for example the top of page 2. Some clear reference to the drive (if that is what the fuel consumption and the emission are associated with) should be clearly made in the claims and the specification.

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 1-6 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

The claims of the instant invention are vague and indefinite because the claims are directed to method steps which describe the variation of various compressor variables that result in the operating points of plural possibly different compressors being moved within the characteristic map specific to that compressor. It is difficult to understand or comprehend the method because a compressor station in general is discussed and vague steps are set forth which are applicable to each of the compressors. A characteristic map is provided but the map does not disclose an operating point or its "travel" as a result of the variations of the compressor variables in each step. This makes understanding the steps of the method difficult and the recitation of the method steps it self confusing. For instance, with regards to the second step of the method which varies the rotational speeds...until surge prevention valves...are closed". As is commonly understood in the art and by one of ordinary skill in the art, the surge valve open when the operating point of the compressor move past the surge protection line with respect to its characteristic map. However, the method does not make clear what the states of the surge valves/compressors was before this step. Did some or all of the valves open when the "at least second" compressor was turned on? What would happen if when the "at least second compressor" was turned on none of the surge valves opened?

The examiner would make the suggestion that the drawings be amended to show characteristic maps for at least two compressors and the movement of the operating points within the maps be illustrated by a series of lines and operating points. For example, the first step of the method could be illustrated by the points A and B which

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show the operating points before and after the first step. Then the second step could have points B and C. If this was done for at least two compressors then any confusion in understanding the method steps would be remedied. If certain steps required the showing of a tortuous path for the operating point (for example, the step including the reciprocal mutually coordinated variation) then this step could be separately illustrated. After thorough consideration, the examiner does not currently believe that such an illustration could be considered new matter given the very commonly known operation of compressors with regards to their characteristic maps and due to the well known operation of natural gas compression stations with plural compressors having surge valves associated therewith.

### ***Conclusion***

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Paice, Blotenberg, Staroselski et al, and Staroselski disclose control arrangements and characteristic maps for natural gas compression systems.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Charles G. Freay whose telephone number is 571-272-4827. The examiner can normally be reached on Monday through Friday 8:30 A.M. to 5:30 P.M..

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Devon Kramer can be reached on 571-272-7118. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Charles G Freay/  
Primary Examiner  
Art Unit 3746

CGF  
December 12, 2008